

Notice of Allowability

Application No.

10/033,507

Examiner

Susan W Berman

Applicant(s)

BENTSEN ET AL.

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-- Th MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to filing.
2. ☒ The allowed claim(s) is/are 41.
3. ☐ The drawings filed on _____ are accepted by the Examiner.
4. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 - a) ☐ All b) ☐ Some* c) ☐ None of the:
 1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).
- * Certified copies not received: _____.
5. ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
 - (a) ☐ The translation of the foreign language provisional application has been received.
6. ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application. **THIS THREE-MONTH PERIOD IS NOT EXTENDABLE**

7. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
8. ☐ CORRECTED DRAWINGS must be submitted.
 - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
 - 1) ☐ hereto or 2) ☐ to Paper No. _____.
 - (b) ☐ including changes required by the proposed drawing correction filed _____, which has been approved by the Examiner.
 - (c) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No. _____.

Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet.

9. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

- | | |
|---|---|
| 1 <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 2 <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3 <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 4 <input type="checkbox"/> Interview Summary (PTO-413), Paper No. _____ |
| 5 <input checked="" type="checkbox"/> Information Disclosure Statements (PTO-1449), Paper No. <u>6-03</u> | 6 <input type="checkbox"/> Examiner's Amendment/Comment |
| 7 <input type="checkbox"/> Examiner's Comment Regarding Requirement for Deposit of Biological Material | 8 <input checked="" type="checkbox"/> Examiner's Statement of Reasons for Allowance |
| | 9 <input type="checkbox"/> Other _____ |

Reasons for Allowance

The following is an examiner's statement of reasons for allowance: The prior art cited herein and otherwise known to the examiner does not teach compositions comprising a reactive species as defined in the instant claims, a one-photon photoinitiator and a multiphoton photosensitizer comprising at least one multiphoton up-converting inorganic phosphor.

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Gotoh et al (6,312,860) disclose a phosphor composition comprising an inorganic phosphor that emits a blue color upon ultraviolet radiation, a base polymer, an ethylenically unsaturated compound and a photopolymerization initiator. There is no suggestion to employ a multiphoton up-converting inorganic phosphor instead of or in addition to the blue emitting phosphor.

Alexander et al (5,166,236) disclose crosslinkable fluoroelastomer composition comprising a fugitive tracer compound or dye that fluoresces and an optional inorganic phosphor, wherein the inorganic phosphor emits only one color (photon).

Prasad et al (5,912,257) disclose two-photon up-converting styryl dyes and applications therefor. Applications include two-photon pumped cavity lasing, optical power limiting or stabilization or reshaping and infrared beam detection. Composites for producing multifunctional optical materials are taught. Methods for killing cells and viruses using a photosensitizer and a two-photon up-converting dye are taught. Methods for recording data in a three-dimensional matrix including a plurality of dye materials are disclosed. A multiphoton up-converting inorganic phosphor is not mentioned.

Zarling et al (5,674,698) disclose compositions for performing sensitive detection of analytes by labeling a probe molecule with an up-converting label. Inorganic phosphors comprising a host material and activator couple providing at least three emission spectra corresponding to the instantly claimed inorganic phosphors are disclosed (column 14-16). The up-converting phosphors are used with a dye as a

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photocatalyst linked to a probe (columns 27-29). Composition with a one-photon photoinitiator are not taught.

Swainson et al (4,333,165) disclose three-dimensional pattern making methods employing two-photon absorption systems comprising a fluorescent dye. See columns 11-22


The following references cited by applicant teach photoreactive compositions corresponding to those instantly disclosed comprising a multiphoton photosensitizer. The multiphoton photosensitizers disclosed do not comprise a multiphoton inorganic up-converting inorganic phosphor. Joshi et al, "Three-dimensional Optical Circuitry Using Two-photon-assisted Polymerization", WO '962, '959, '958, '917, '915, '452, and '409.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Susan W Berman whose telephone number is 703 308 0040. The examiner can normally be reached on M-F 9:00-5:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, James Seidleck can be reached on 703 308 2462. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703 308 0661.



Susan W Berman
Primary Examiner
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